



#### About us:

E.N. Pipe and sewer technology was founded in 2019 and has steadily expanded its services in the field of pipe and sewer technology.

Once started as a classic pipe cleaning service, the range of services has been steadily expanded and now makes us one of the most dedicated specialist pipe and sewer engineering companies in the region. Our customers include private homeowners, plumbing and heating companies, property management companies, housing associations, engineering offices and architects.

In addition to sewer and drain cleaning, our range of services includes TV camera inspections, condition and function checks of private sewage pipes, sewer locating and minimally invasive pipe refurbishment.

You can always rely on us! Our emergency service is on standby 24 hours a day, 365 days a year to ensure that any problems are dealt with quickly and professionally. Our team consists exclusively of specially trained personnel, as the improper use of our sometimes heavy machines and tools in untrained hands can cause more harm than good. From the very first minute, you will be competently advised by our experts. This gives you the opportunity to assess on the phone which means we can use to get your problem under control.



# Pipe and sewer cleaning:

Sewage pipes age and, like the arteries of the human body, can become overgrown and clogged. In order to slow down this process, tap, ground and house connection pipes should be cleaned professionally on a regular basis, because along with the wastewater, solids are also discharged into the sewer system. Often the flow velocity in sewers is not optimal to flush away these solids. In addition, there are often constructional defects that lead



to a negative influence on the sewage hydraulics. Sooner or later, the result is a blockage of the pipes with all its unpleasant side effects. Here we provide solutions, both acutely and preventively!

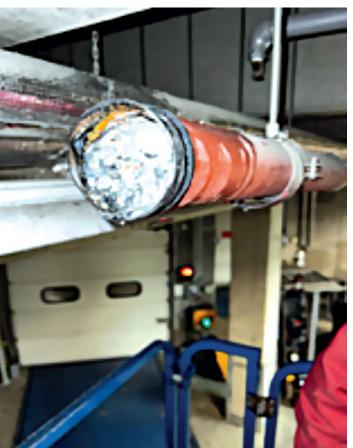
Milling work on a downpipe starting from the flat roof

## Electromechanical pipe cleaning:

By means of electromechanical cleaning, the pipe to be cleaned is machined and centrifuged by appropriate milling attachments and centrifugal chains. The original pipe diameter is restored. Sediments, roots or foreign objects are no problem for us. The range of application extends from DN20-DN200



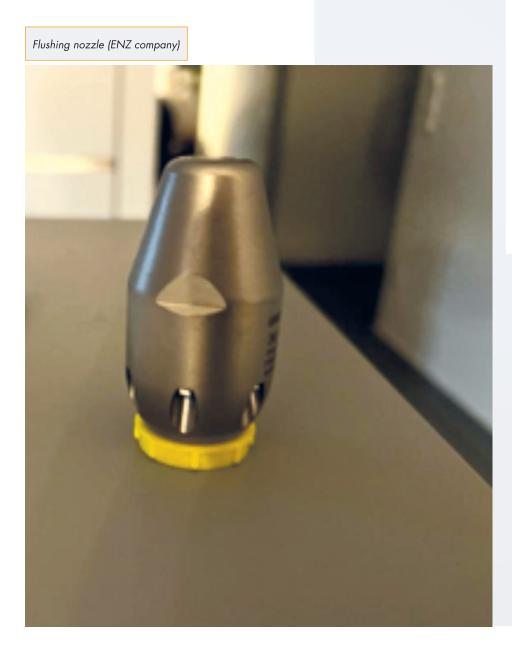
Professional milling tool



Underdrain pipe total blockage

## High-pressure flush cleaning:

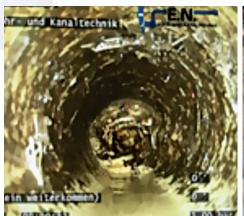
High pressure flush cleaning is the complement to electromechanical pipe cleaning. With the power of water and up to 160 bar pressure, both roots, grease and sedimentation are removed from your sewer. The procedure usually forms the basis for a professional sewer TV inspection.



#### Sewer TV inspection:

In order to avoid or prevent damage, we offer you an examination of your pipe and sewer system. After the initial survey and cleaning of the examination section, we analyse the condition of your drainage pipe using the latest inspection technology. Damaged areas such as pipe breaks, socket offsets, cracks and shards and root ingrowths are documented and measured. You will then receive a detailed report on the condition of the inspected pipes, including the video recordings. The TV inspections are carried out in accordance with strict ATV/DWA guidelines.

In addition to recording the condition and preserving evidence, the documentation is also used as a basis for possible refurbishment measures. We also carry out professional house connection inspections in accordance with DIN 1986-30.



TV camera examination of an underground pipe



Axial displacement visible in an underground

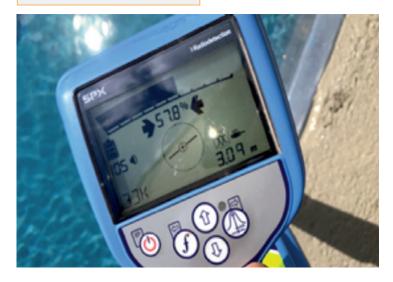


TV camera inspection after water damage starting from a flat roof

### Sewer and pipe location:

Using our locating equipment (transmitter – receiver system), we locate the course and depth of pipes and sewers, supplement drainage plans or create sketches and site plans of the located pipe systems. Furthermore, we are able to locate pipe bursts precisely and determine their depth. This is immensely important for repair work using the open trench method. Changes in nominal diameter and bends are no obstacle with this method.

Locating device



### Sewer and pipe rehabilitation:

The trenchless rehabilitation of sewage pipes is both ecologically and economically a challenge for any executing company. Not only extensive knowledge and experience, but also advanced technologies and high-quality materials are necessary to efficiently carry out a qualitatively professional and long-lasting refurbishment. Punctual damage as well as entire pipe sections can be refurbished efficiently and reliably. Our team is trained and certified for the respective refurbishment systems used. A TV camera inspection is absolutely necessary before any refurbishment measure.

In the case of renovation, we will be happy to provide you with a renovation concept and/or a free quotation.



#### Point liner system (punctual repair):

The point liner refurbishment offers us the possibility to repair damaged spots in the pipe run from the inside without any problems – even in case of broken pieces and root ingrowth. Even hard-to-reach damaged areas can be handled with our DIBT-approved short liner method. It is also possible to install the point liner in an overlapping manner, whereby it must be checked whether, in individual cases, inliner refurbishment would not be the better alternative.



Repair of a main line using the point liner system

### Pipe liner renovation (PL inliner system):

In the PL inliner system, a needle felt or seamless textile hose (made of 100% polyester) impregnated with epoxy resin is inserted into the drainage pipe to be refurbished in the corresponding pipe dimension using the inversion method. In addition to basic pipes and sewers, internal downpipes (e.g. flat roof drainage) can also be repaired cleanly and reliably - without chiseling or breaking open walls. After the specified curing time, branches and connections closed by the renovation are re-milled and reopened by means of a milling robot. This operation is carried out under constant TV camera monitoring and ensures a smooth and safe process. DIBt certification with approval no. Z-42.3-440

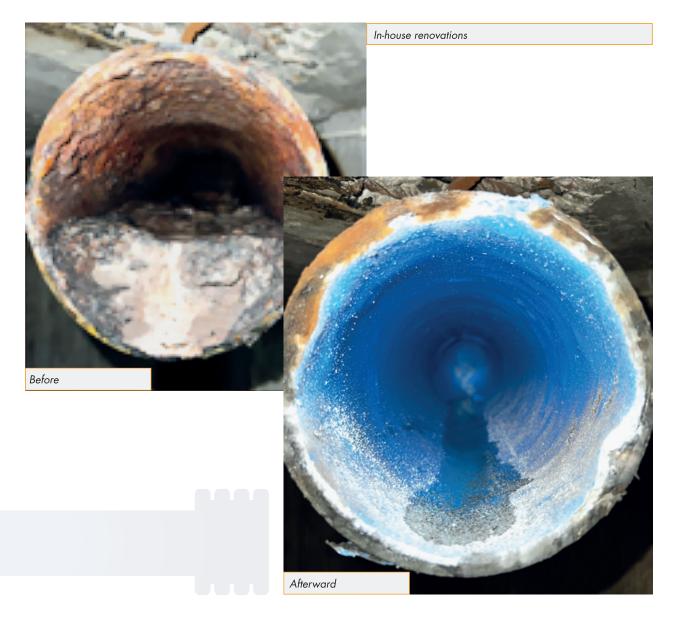


Base pipe after renovation

#### Downpipe renovation:

Another problem in building drainage is leaking, dilapidated or damaged downpipes. In particular, interior downpipes/rain pipes can lead to water damage and mould growth in such cases.

There are numerous reasons for this, but it is usually due to material fatigue (ageing), wear, corrosion or an installation error. Susceptible pipe materials are often cast iron or Eternit, but also plastic. If the above-mentioned problems occur, in most cases the pipe can be refurbished from the inside without breaking open the wall. In this case, a so-called inliner is inserted into the downpipe, similar to the renovation of basic pipes, which seals the pipe permanently and for decades and keeps it absolutely stable.



## **E.N.** PIPE AND SEWER TECHNOLOGY



Apart from the noise and dirt, refurbishing downpipes without breaking open walls is usually much cheaper and more economical than a complete renewal by replacing the pipe, whereby walls have to be prised open.



A downpipe renovation using a pipe liner can be carried out and finished completely within 24 hours. Due to controlled cold curing within 24 hours, a construction site is completed without much noise, dirt and disturbance for the residents.

With our new "downpipe renovation with steam curing" method, things can now be done even faster.



By installing an inliner with the controlled addition of steam, curing takes place even faster. This reduces the time from approx. 24 hours to approx. 12 hours, including all preparations and ancillary work.

We will be happy to advise you.

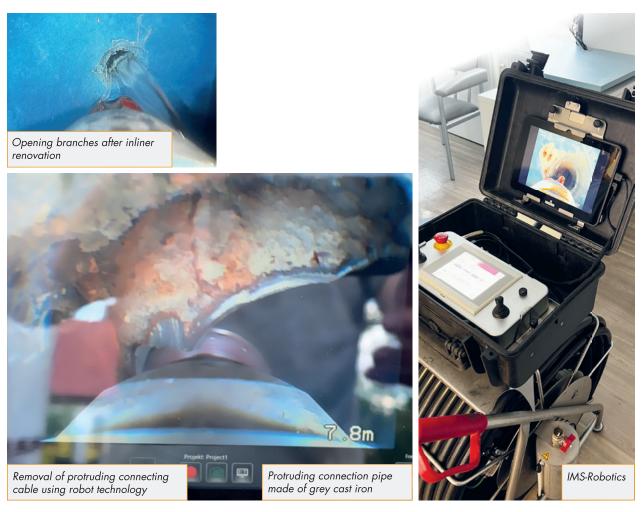


### The Spray-Liner

Pipe refurbishment from DN40 is the original Spray-Liner spraying method. Epoxy resin is sprayed directly onto the inside of the pipe by means of a rotating spray pot. This procedure is carried out via various access points (toilet connections, wall connections, etc.) after a prior TV camera inspection and pipe cleaning. This is the perfect complement to the inliner refurbishment of the downpipes in your building. It offers you a quick and economical modernisation of the building drainage system.

### Robot milling technology:

The use of our modern high-tech milling robots makes it now possible to handle even the most difficult cases in the field of pipe and sewer technology - regardless of whether they involve drain obstacles, protruding sockets or the opening of closed branches after refurbishment measures. We have various milling attachments (diamond-coated) available.





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We are there for you 24 hours!





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